

ABSTRACT OF DISCLOSURE

A method and apparatus for preventing an adjacent track erase effect due to a magnetic head. In the method, a write command is received, an ambient temperature of a hard disc drive is measured, and whether the ambient temperature exceeds a threshold temperature is determined. If the ambient temperature exceeds the threshold temperature, the intensity of a write current is adjusted according to the position of a magnetic head on the hard disc drive. If an overshooting value of the write current exceeds a predetermined steady-state value, the overshooting value of the write current is adjusted. Applying the write current having the intensity and the overshooting value adjusted to the magnetic head. An algorithm having writing intervals can also be used in a hard disc drive. Thus, a writing field can be minimized and made suitable for variations in the temperature of the hard disc drive and coercivity of a magnetic disc so that an adjacent track erase effect can be reduced. Also, since a thermal pole tip protrusion effect due to a several-times-repeated writing operations can be prevented, a margin of a bit error rate of a magnetic head/magnetic disc can be increased and defects occurring on the magnetic head and the magnetic disc can be minimized.